☐ **1:** AH001152. Bovine preprotach...[gi:163589] Links

```
LOCUS       BOVPPTA1                  304 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 1''.
ACCESSION   M14344
VERSION     M14344.1  GI:163580
KEYWORDS    .
SEGMENT     1 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 304)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
     source          1..304
                     /organism="Bos taurus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <162..>304
                     /note="preprotachykinin mRNA"
     intron          285..>304
                     /note="pre-tach-B intron A"
BASE COUNT       63 a     85 c     97 g     59 t
ORIGIN      162 bp upstream of EcoRI site.
        1 ggcagtgggc acagacaggg ccagccgggc tggaggcgag ggggaccaga cctctcactc
       61 ccggcctgtg atatctccca ggctgctcct aggagagaaa aatgaatccc ttccctgctg
      121 tttctccccc ccctaagatc tcctcagtgg gctccaaggg ggaattcctg ctcgtcagtg
      181 agcatgtgat tgaactgctg accaaaatat gccgggctac actggatgcc acgcagatgc
      241 agcttccagt caccgtgact gaggagtaag gccgtgagcc gggggtgagg gatggcttgg
      301 ggca
//
LOCUS       BOVPPTA2                  371 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 1'.
ACCESSION   M14345
VERSION     M14345.1  GI:163581
KEYWORDS    .
SEGMENT     2 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 371)
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  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
     source          1..371
                     /organism="Bos taurus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <1..>371
                     /note="preprotachykinin mRNA and introns"
     intron          <1..41
                     /note="pre-tach-B intron A"
     intron          338..>371
                     /note="pre-tach-B intron B"
BASE COUNT       70 a    106 c    107 g     88 t
ORIGIN      226 bp downstream of exon 1''; 236 bp upstream of Sau3AI site.
        1 gagggcgcta cgtttgcctt tctatctgtt ccctgctcca ggttctcagt gaagttcaag
       61 gagggcagct tgacggtcaa ggtcatccag ggccctgggg gtggtgggac tggcaagctg
      121 agcttcaaga agaaggggag tcgttgcctg gaggtgactg tacaatgagg aggtgcagcg
      181 gtttcttcct cctggacggg caccggcccc acccccacct gcccaccttt gtgggggatc
      241 tcaagtctga acccccctgat aggctgtggg gtcggagatt gaagaaccct tgaagaggaa
      301 cttgcttctc ccaaaccttt ccagaactct ctccaaagtt agcttcctcc taccctcggc
      361 ctctttgccc a
//
LOCUS       BOVPPTA3                  334 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 1.
ACCESSION   M14346
VERSION     M14346.1  GI:163582
KEYWORDS    .
SEGMENT     3 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 334)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     intron          <1..216
                     /note="pre-tach-B intron B"
     prim_transcript <17..>334
                     /note="preprotachykinin mRNA and introns"
     intron          315..>334
                     /note="pre-tach-B intron C"
BASE COUNT       51 a    125 c     84 g     74 t
ORIGIN      About 5700 bp downstream of exon 1'.
        1 tttgtggtgt gtgtgtgtgt gtgtgtgcgc gtgtgtctga agcctatatc ccccttcacc
       61 cccaccagcc tcccgccccg ccagccaccc tgggattggt gattctcagc ccctcccccg
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      121 gctccccccag accctcccag agcctttatc agggagctgg gcaggagttc ctgccacatt
      181 ccccagtccc tccactccct gtttctctct tcacagcagc agcaccagca gcgttcgtgg
      241 ggagcgggca gtgcttccgg ccagctccct gatcctgcta gaccatctgt cccaggctcc
      301 aagctgctcc acaggtaggc acaggccaga gaat
//
LOCUS       BOVPPTA4                  179 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 2.
ACCESSION   M14347
VERSION     M14347.1  GI:163583
KEYWORDS    .
SEGMENT     4 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 179)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <1..>179
                     /note="preprotachykinin mRNA and introns"
     intron          <1..40
                     /note="pre-tach-B intron C"
     exon            <46..159
                     /note="preprotachykinin B,  (1st expressed exon)"
                     /number=1
     intron          160..>179
                     /note="pre-tach-B intron D"
BASE COUNT       22 a     58 c     54 g     45 t
ORIGIN      557 bp downstream of exon 1.
        1 tcctccctgc ctcccctgtc ctgtctctct gtcctcctag gcatcatgcg gagcaccctg
       61 ctgtttgcag tcatcctggc cctcagctca gctcggagtt tgggtgcggt ctgtgaggag
      121 tcacaggagc aggtggtgcc cggtgggggt cacagcaagg taaggctccc cctctggtt
//
LOCUS       BOVPPTA5                  169 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 3.
ACCESSION   M14348
VERSION     M14348.1  GI:163584
KEYWORDS    .
SEGMENT     5 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 169)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
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COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /organism="Bos taurus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <1..>169
                     /note="preprotachykinin mRNA and introns"
     intron          <1..40
                     /note="pre-tach-B intron D"
     exon            41..149
                     /number=3
     intron          150..>169
                     /note="pre-tach-B intron E"
BASE COUNT       33 a     54 c     41 g     41 t
ORIGIN      About 2000 bp downstream of exon 2.
        1 gtgagccttc cttccggccc tctttgtctc tctcccccag aaggactcaa atctctacca
       61 gctgccccca tcattgctcc ggagactcta tgatagccgc gtggtctccc tggatggatt
      121 gctcaagatg ctgagcaagg ccagcgtagg taggatatac agcctcagg
//
LOCUS       BOVPPTA6                  90 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 4.
ACCESSION   M14349
VERSION     M14349.1  GI:163585
KEYWORDS    .
SEGMENT     6 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 90)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <1..>90
                     /note="preprotachykinin mRNA and introns"
     intron          <1..40
                     /note="pre-tach-B intron E"
     exon            41..70
                     /number=4
     intron          71..>90
                     /note="pre-tach-B intron F"
BASE COUNT       18 a     29 c     16 g     27 t
ORIGIN      195 bp downstream of exon 3.
        1 gatcccattc cccagttaca tgcttgttgt tgcttcacag gtcctaagga gtcaccactt
       61 ccccagaaac gtgagtagcc tcctttcctt
//
LOCUS       BOVPPTA7                 114 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine tachykinin B gene, exon 5.
ACCESSION   M14350
VERSION     M14350.1  GI:163586
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KEYWORDS    .
SEGMENT     7 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 114)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
     prim_transcript <1..>114
                     /note="preprotachykinin mRNA and introns"
     intron          <1..40
                     /note="pre-tach-B intron F"
     exon            41..94
                     /number=5
     intron          95..>114
                     /note="pre-tach-B intron G"
BASE COUNT       22 a     23 c     38 g     31 t
ORIGIN      About 480 bp downstream of exon 4.
        1 ctcatcgtga tggttgacca tgttggccct ttttatgcag gtgacatgca tgacttcttt
       61 gtgggtctca tgggcaagag gaacctccag ccaggtagga gcatggtggg aggg
//
LOCUS       BOVPPTA8                  135 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 6.
ACCESSION   M14351
VERSION     M14351.1  GI:163587
KEYWORDS    .
SEGMENT     8 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 135)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:9913"
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     prim_transcript <1..>135
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     intron          <1..40
                     /note="pre-tach-B intron G"
     exon            41..>114
                     /note="preprotachykinin B"
                     /number=6
     intron          116..>135
                     /note="pre-tach-B intron H"
BASE COUNT       41 a     41 c     22 g     31 t
ORIGIN      385 bp downstream of exon 5.
        1 agaaaaatcc ctcctaactt cacccтttac atccctccag acactcctgt tgatataaac
       61 caagaaaaca tccccagctt tggcaccttc aagtaccctc caagtgtgga atgaggtaag
      121 gacttactca gggcg
//
LOCUS       BOVPPTA9                  361 bp    DNA     linear   MAM 27-APR-1993
DEFINITION  Bovine preprotachykinin B gene, exon 7.
ACCESSION   M14352
VERSION     M14352.1  GI:163588
KEYWORDS    .
SEGMENT     9 of 9
SOURCE      Bos taurus (cow)
  ORGANISM  Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
REFERENCE   1  (bases 1 to 361)
  AUTHORS   Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
  TITLE     Structure and gene organization of bovine neuromedin K precursor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
  MEDLINE   86313713
   PUBMED   3462746
COMMENT     Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
FEATURES             Location/Qualifiers
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                     /db_xref="taxon:9913"
     prim_transcript <1..304
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     intron          <1..30
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BASE COUNT       69 a    103 c     61 g    128 t
ORIGIN      About 2300 bp downstream of exon 6.
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       61 gtgaagacac ccacccctgg atgcacatgc ttctatttcc cttcctcctc cctacccctg
      121 taacactctt gtgctttgac cccttcttct ctctgtccca ctggctgcag aaactgcctt
      181 gtgagcatcc ccagtccctg taatcattga ctacagatgg ccctggattt tctgtagcat
      241 cctacaaata taatgtctct ctctattcct caacaataaa ggatttttac atattatgac
      301 ctacaggatg tatttggttg gtggatgggt ttttctcttt cttgactctt ttggctgtat
      361 c
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Oct 2 2003 18:31:01

☐ **1:** NM_009312. Mus musculus tach...[gi:6678208] Links

LOCUS NM_009312 851 bp mRNA linear ROD 06-OCT-2003
DEFINITION Mus musculus tachykinin 2 (Tac2), mRNA.
ACCESSION NM_009312
VERSION NM_009312.1 GI:6678208
KEYWORDS .
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 851)
AUTHORS Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G., Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D., Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K., Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F., Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L., Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L., Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S., Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J., Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J., McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S., Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W., Villalon,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A., Fahey,J., Helton,E., Ketteman,M., Madan,A., Rodrigues,S., Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y., Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D., Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M., Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E., Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.
TITLE Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
MEDLINE 22388257
PUBMED 12477932
REFERENCE 2 (bases 1 to 851)
AUTHORS Okazaki,Y., Furuno,M., Kasukawa,T., Adachi,J., Bono,H., Kondo,S., Nikaido,I., Osato,N., Saito,R., Suzuki,H., Yamanaka,I., Kiyosawa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A., Schonbach,C., Gojobori,T., Baldarelli,R., Hill,D.P., Bult,C., Hume,D.A., Quackenbush,J., Schriml,L.M., Kanapin,A., Matsuda,H., Batalov,S., Beisel,K.W., Blake,J.A., Bradt,D., Brusic,V., Chothia,C., Corbani,L.E., Cousins,S., Dalla,E., Dragani,T.A., Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T., Gariboldi,M., Gissi,C., Godzik,A., Gough,J., Grimmond,S., Gustincich,S., Hirokawa,N., Jackson,I.J., Jarvis,E.D., Kanai,A., Kawaji,H., Kawasawa,Y., Kedzierski,R.M., King,B.L., Konagaya,A., Kurochkin,I.V., Lee,Y., Lenhard,B., Lyons,P.A., Maglott,D.R., Maltais,L., Marchionni,L., McKenzie,L., Miki,H., Nagashima,T., Numata,K., Okido,T., Pavan,W.J., Pertea,G., Pesole,G.,

Petrovsky,N., Pillai,R., Pontius,J.U., Qi,D., Ramachandran,S., Ravasi,T., Reed,J.C., Reed,D.J., Reid,J., Ring,B.Z., Ringwald,M., Sandelin,A., Schneider,C., Semple,C.A., Setou,M., Shimada,K., Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M., Verardo,R., Wagner,L., Wahlestedt,C., Wang,Y., Watanabe,Y., Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I., Yang,L., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carninci,P., Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.

TITLE Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

JOURNAL Nature 420 (6915), 563-573 (2002)

MEDLINE 22354683

PUBMED 12466851

REFERENCE 3 (bases 1 to 851)

AUTHORS Kako,K., Munekata,E., Hosaka,M., Murakami,K. and Nakayama,K.

TITLE Cloning and sequence analysis of mouse cDNAs encoding preprotachykinin A and B

JOURNAL Biomed. Res. 14, 253-259 (1993)

COMMENT PROVISIONAL REFSEQ: This record has not yet been subject to final NCBI review. The reference sequence was derived from D14423.1.

FEATURES Location/Qualifiers

source 1..851
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/mol_type="mRNA"
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gene 1..851
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/db_xref="GeneID:21334"
/db_xref="LocusID:21334"
/db_xref="MGI:98476"

CDS 265..615
/gene="Tac2"
/note="substance K; neurokinin 2; neurokinin A; neuromedin L; neuropeptide K; neurokinin alpha;
go_component: extracellular space [goid 0005615] [evidence TAS] [pmid 12466851];
go_function: tachykinin [goid 0008648] [evidence IEA];
go_function: receptor binding [goid 0005102] [evidence IEA];
go_process: tachykinin signaling pathway [goid 0007217] [evidence IEA];
go_process: neuropeptide signaling pathway [goid 0007218] [evidence IEA];
go_process: synaptic transmission [goid 0007268] [evidence IEA]"
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Oct 2 2003 18:31:01

1: Brain Res. 1987 Sep;388(3):243-9.

A cDNA encoding the precursor of the rat neuropeptide, neurokinin B.

Bonner TI, Affolter HU, Young AC, Young WS 3rd.

Laboratory of Cell Biology, National Institute of Mental Health, Bethesda, M 20892.

We have isolated a cDNA clone from a rat cerebral cortex library which encodes the 116 amino acid precursor of the neuropeptide, neurokinin B. The precursor has 68% amino acid homology to the bovine precursor and encode single peptide of the tachykinin family. Except for possible small variations a both ends of the message, there appears to be only a single species of neurokinin B mRNA in rat cerebral cortex. In situ hybridization histochemist indicates that the message is widely distributed in the rat brain in a pattern distinct from that of substance P message.

PMID: 3479225 [PubMed - indexed for MEDLINE]

☐ 1: NM_019162. Rattus norvegicus...[gi:9507174] Links

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VERSION     NM_019162.1  GI:9507174
KEYWORDS    .
SOURCE      Rattus norvegicus (Norway rat)
  ORGANISM  Rattus norvegicus
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            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Rattus.
REFERENCE   1  (bases 1 to 727)
  AUTHORS   Bonner,T.I., Affolter,H.U., Young,A.C. and Young,W.S. III.
  TITLE     A cDNA encoding the precursor of the rat neuropeptide neurokinin B
  JOURNAL   Brain Res. Mol. Brain Res. 2, 243-249 (1987)
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Oct 2 2003 18:31:01

NiceProt View of Swiss-Prot: Q9UHF0

Note: most headings are clickable, even if they don't appear as links. They link to the user manual or other documents.

Entry information

Entry name	**TKNK_HUMAN**
Primary accession number	**Q9UHF0**
Secondary accession numbers	None
Entered in Swiss-Prot in	Release 40, October 2001
Sequence was last modified in	Release 40, October 2001
Annotations were last modified in	Release 42, September 2003

Name and origin of the protein

Protein name	**Neurokinin B [Precursor]**
Synonyms	**NKB** **Neuromedin K** **ZNEUROK1**
Gene name	**TAC3**
From	Homo sapiens (Human) [TaxID: 9606]
Taxonomy	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

References

[1] SEQUENCE FROM NUCLEIC ACID.
Sheppard P., Jelinek L., Whitmore T., Blumberg H., Lehner J., O'Hara P.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.

[2] SEQUENCE FROM NUCLEIC ACID.
TISSUE=Placenta;
MEDLINE=20322570; PubMed=10866201; [NCBI, ExPASy, EBI, Israel, Japan]
Page N.M., Woods R.J., Gardiner S.M., Lomthiasong K., Gladwell R.T., Butlin D.J., Manyonda I.T., Lowry P.J.;
"Excessive placental neurokinin B secretion during the third trimester causes pre-eclampsia.";
Nature 405:797-800(2000).

[3] SEQUENCE FROM NUCLEIC ACID.
TISSUE=Brain;
MEDLINE=22388257; PubMed=12477932; [NCBI, ExPASy, EBI, Israel, Japan]
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L.,

Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

Comments

- ***FUNCTION***: Tachykinins are active peptides which excite neurons, evoke behavioral responses, are potent vasodilators and secretagogues, and contract (directly or indirectly) many smooth muscles *(By similarity)*.
- ***SUBCELLULAR LOCATION***: Secreted.
- ***DEVELOPMENTAL STAGE***: In pregnancy, the expression of NKB is confined to the outer syncytiotrophoblast of the placenta, significant concentrations of NKB can be detected in plasma as early as week 9, and plasma concentrations of NKB are grossly elevated in pregnancy-induced hypertension and pre-eclampsia.
- ***SIMILARITY***: Belongs to the tachykinin family.

Copyright

Cross-references

EMBL	AF186112; AAF01430.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AF216586; AAF76980.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] BC032145; AAH32145.1; -.[EMBL / GenBank / DDBJ] [CoDingSequence]
Genew	HGNC:11521; TAC3.
CleanEx	HGNC:11521; TAC3.
GeneCards	TAC3.
GeneLynx	TAC3; Homo sapiens.
GenAtlas	TAC3.
MIM	162330 [NCBI / EBI].
GO	GO:0005615;Cellular component: extracellular space *(traceable author statement)*. GO:0005625;Cellular component: soluble fraction *(traceable author statement)*. GO:0008648;Molecular function: tachykinin *(traceable author statement)*. GO:0007565;Biological process: pregnancy *(traceable author statement)*. GO:0007217;Biological process: tachykinin signaling pathway *(traceable author statement)*.
SOURCE	TAC3; Homo sapiens.
Ensembl	Q9UHF0; Homo sapiens. [Entry / Contig view]
	IPR003635; Neurokinin.

InterPro	IPR002040; Tachy_Neurokinin. Graphical view of domain structure.
Pfam	PF03823; Neurokinin_B; 1.
ProDom	PD020370; Neurokinin; 1. [Domain structure / List of seq. sharing at least 1 domain]
PROSITE	PS00267; TACHYKININ; 1.
HOVERGEN	[Family / Alignment / Tree]
BLOCKS	Q9UHF0.
ProtoNet	Q9UHF0.
ProtoMap	Q9UHF0.
PRESAGE	Q9UHF0.
DIP	Q9UHF0.
ModBase	Q9UHF0.
SWISS-2DPAGE	Get region on 2D PAGE.

Keywords

Tachykinin; **Neuropeptide**; **Cleavage on pair of basic residues**; **Amidation**; **Signal**.

Features

 Feature table viewer

 Feature aligner

Key	From	To	Length	Description
SIGNAL	1	16	16	*POTENTIAL.*
PROPEP	17	78	62	*BY SIMILARITY.*
PEPTIDE	81	90	10	NEUROKININ B.
PROPEP	94	121	28	*BY SIMILARITY.*
MOD_RES	90	90		AMIDATION (G-91 PROVIDE AMIDE GROUP) (*BY SIMILARITY*).

Sequence information

Length: **121 AA** [This is the length of the unprocessed precursor]

Molecular weight: **13438 Da** [This is the MW of the unprocessed precursor]

CRC64: **14C9AFE2EE9EDECA** [This is a checksum on the sequence]

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E

Q9UHF0 in FASTA format

View entry in original Swiss-Prot format
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Report form for errors/updates in this Swiss-Prot entry

BLAST submission on ExPASy/SIB or at NCBI (USA)

Sequence analysis tools: ProtParam, ProtScale, Compute pI/Mw, PeptideMass, PeptideCutter, Dotlet (Java)

ScanProsite, MotifScan

Search the SWISS-MODEL Repository

ExPASy Home page	Site Map	Search ExPASy	Contact us	Swiss-Prot

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Effects of human calcitonin gene-related peptide and substance on human intracervical arteries.

Hansen V, Schifter S, Allen J, Maigaard S, Forman A.

Department of Obstetrics and Gynecology, University of Aarhus, Denmark.

The contractile effects of substance P and human calcitonin gene-related peptide (human CGRP) on isolated human intracervical arteries were studied Human cervical tissue specimens were excised after hysterectomy at various phases of the menstrual cycle (n = 14) and small intracervical arteries were dissected free by microtechnique. Ring preparations of the vessels were prepared and mounted in organ baths, and isometric circular tension was recorded. Neither compound affected resting tension. Both peptides showed potent relaxing effects on vessels precontracted by noradrenaline 10(-5) M. Substance P exhibited the higher potency, while human CGRP showed the higher efficacy. The relaxing effects of the two compounds were unaffected l pretreatment with indomethacin 10(-6) M, propranolol 10(-6) M and atropine 10(-6) M. The results support a role for the two peptides in the regulation of cervical blood flow.

PMID: 2456971 [PubMed - indexed for MEDLINE]